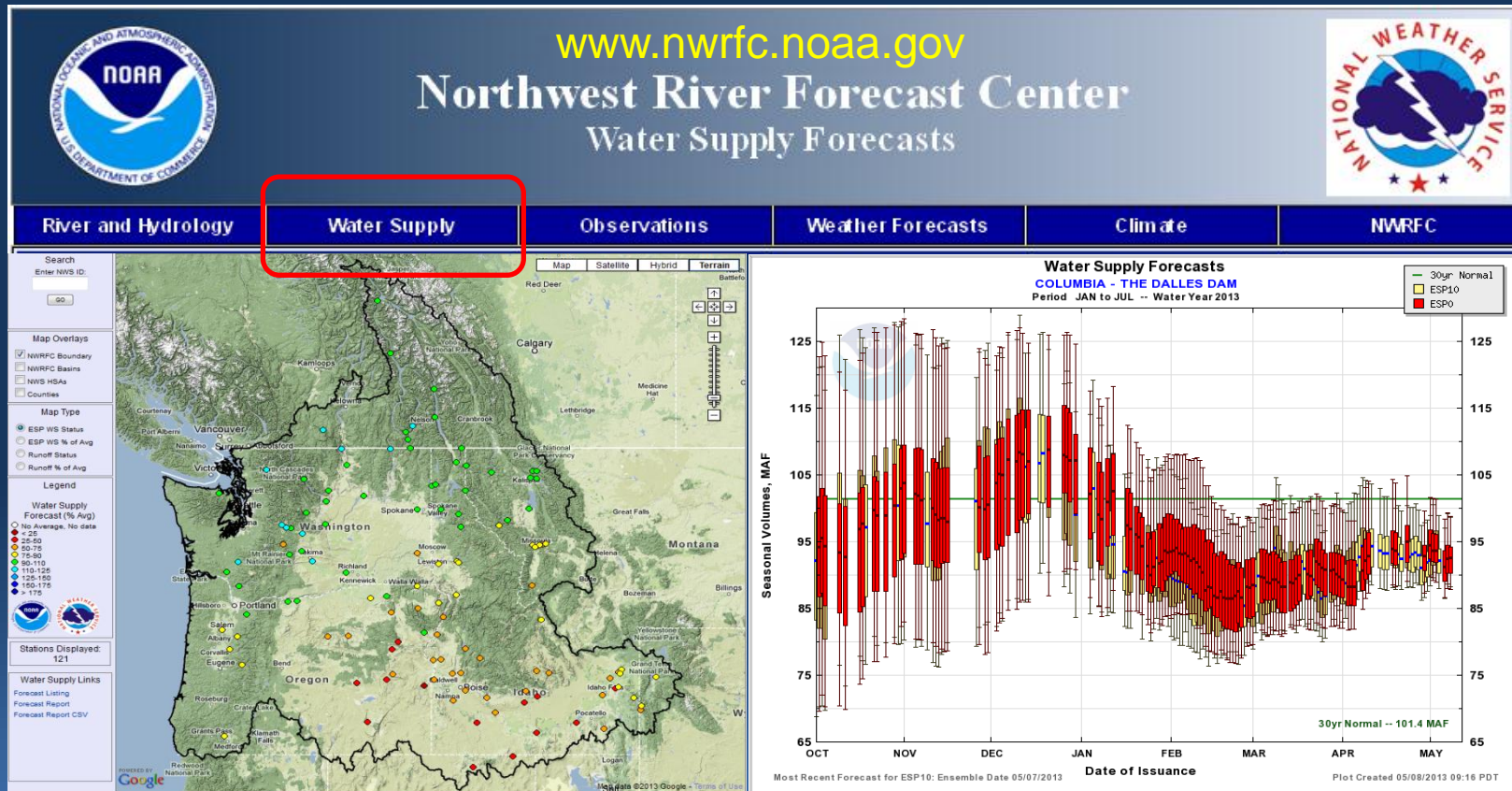


May 2013 Water Supply Briefing



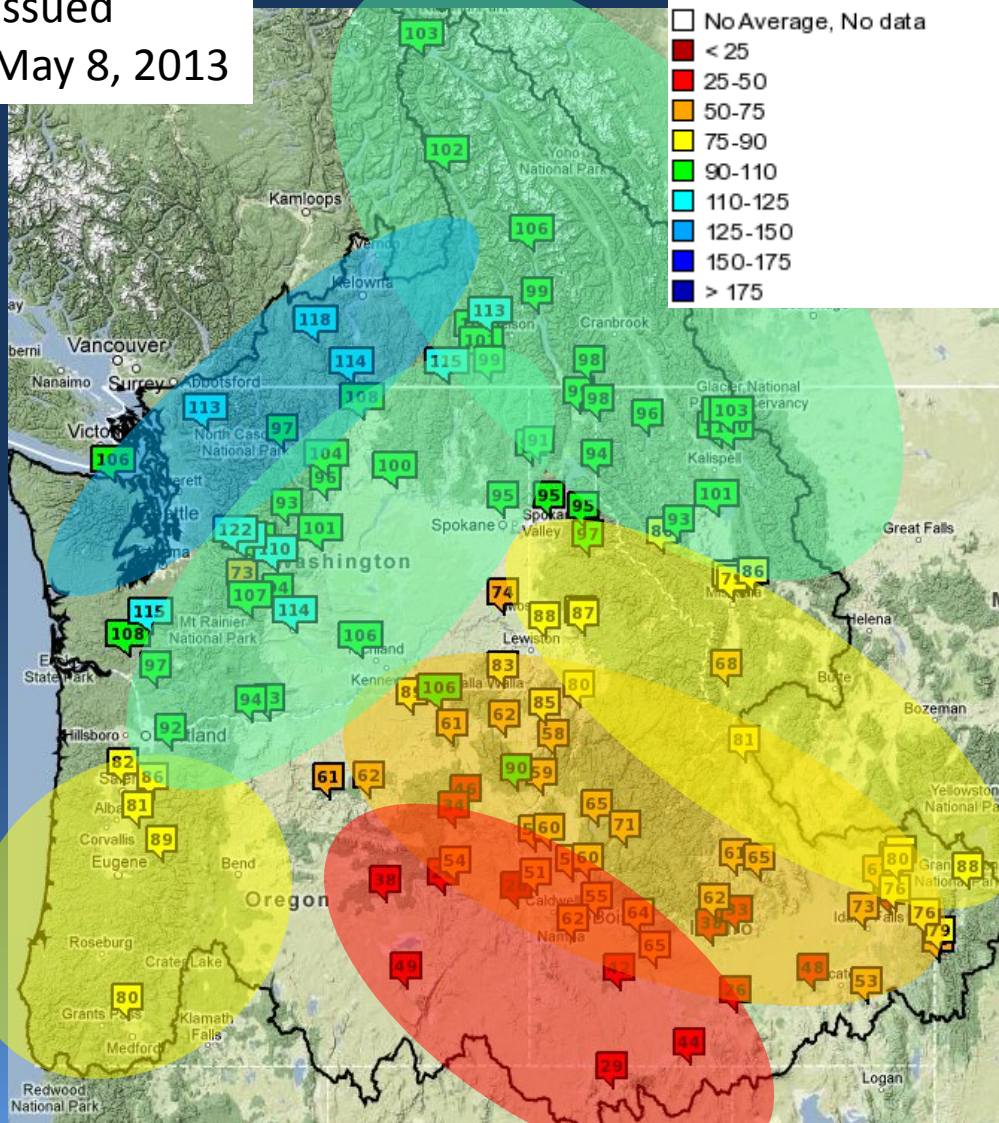
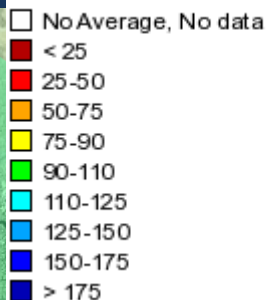
Steve King, NWRFC
Stephen.King@noaa.gov
(503)326-7291



Water Supply Summary

Issued
May 8, 2013

Water Supply Forecast (% Avg)



Most Apr-Sep forecasts are near or below normal

Generally, forecast volumes are similar to what they were at time of April Webinar...**slightly higher in north and slightly lower in south**

Conditions are driest in the south-eastern basins

Wettest forecasts (above 105%) are in western Washington and in the British Columbia.



Observed Conditions



Precipitation

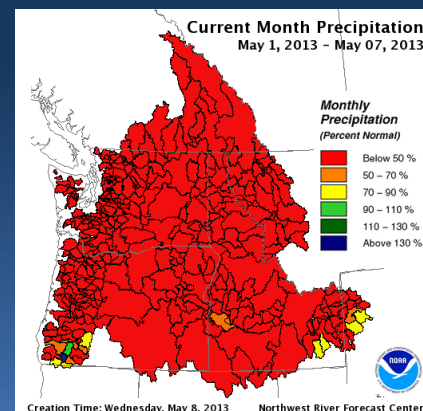
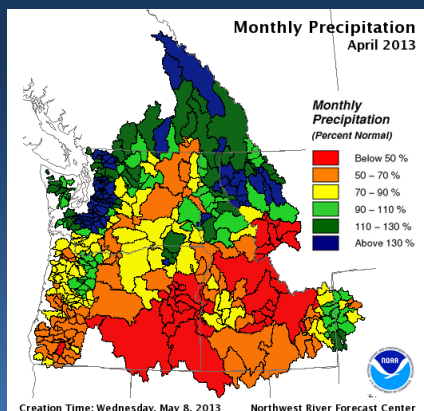
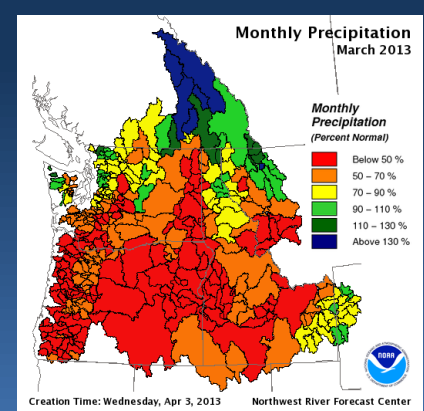
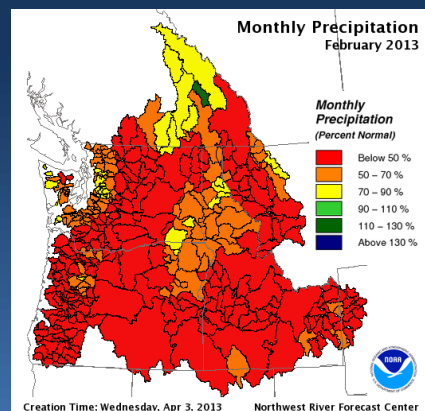
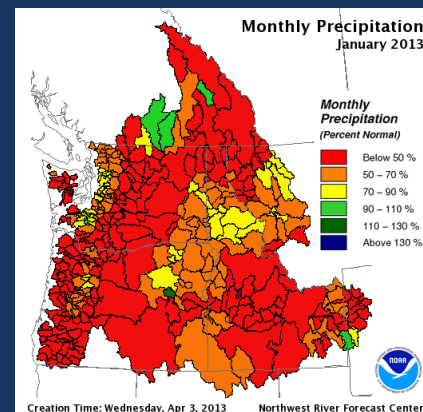
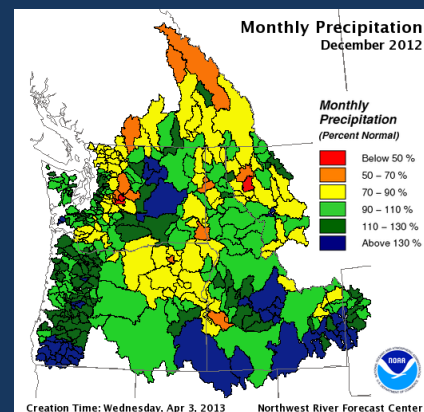
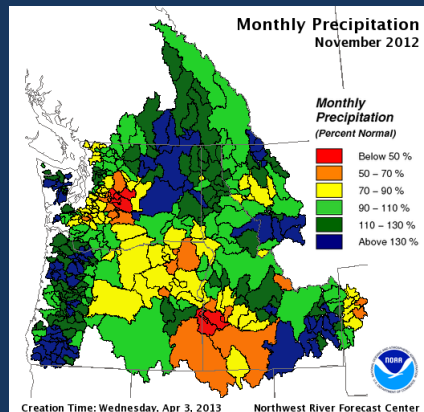
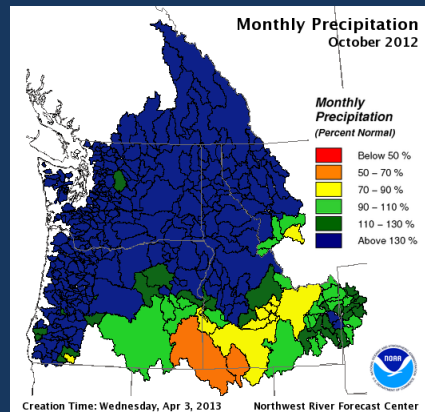
Temperature

Runoff

Snowpack

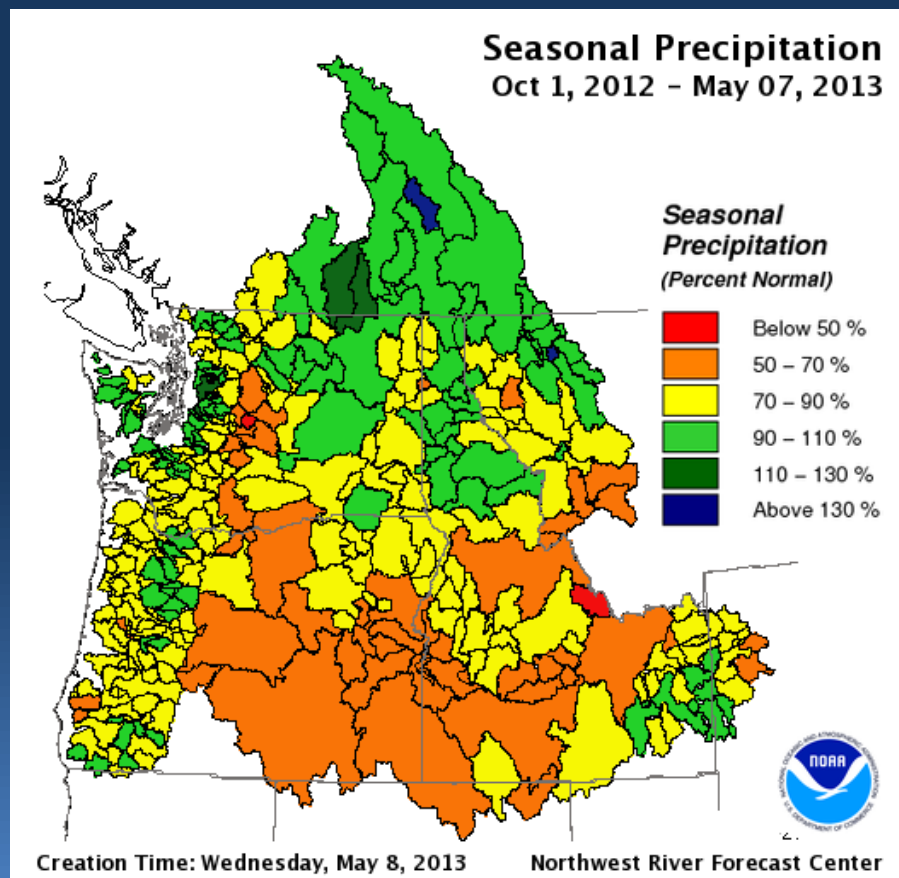


Observed Monthly Precipitation





Observed Seasonal Precipitation

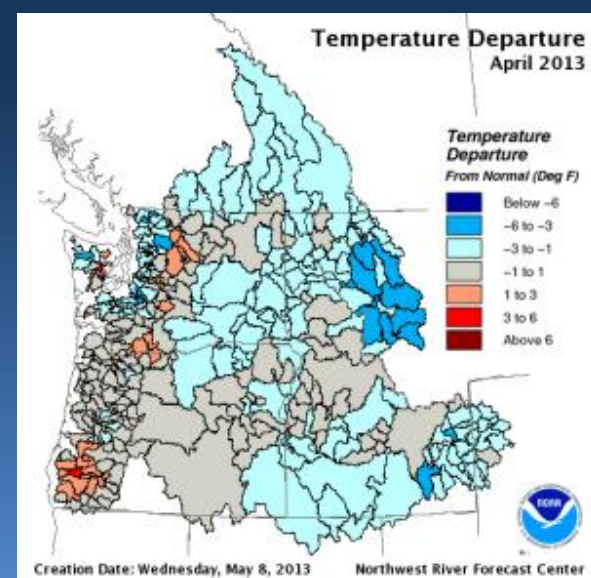
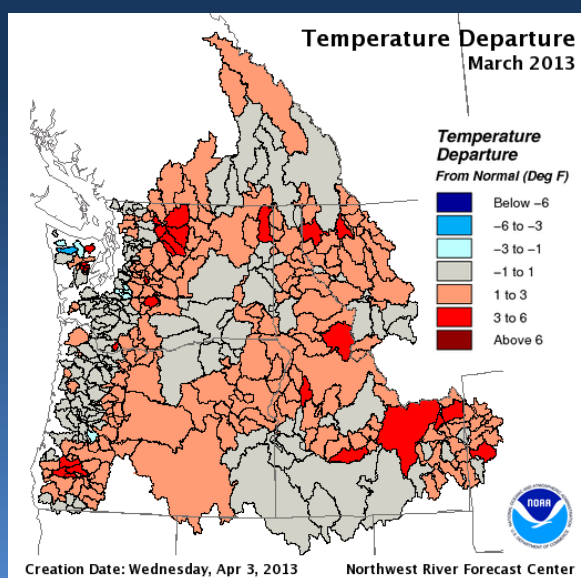
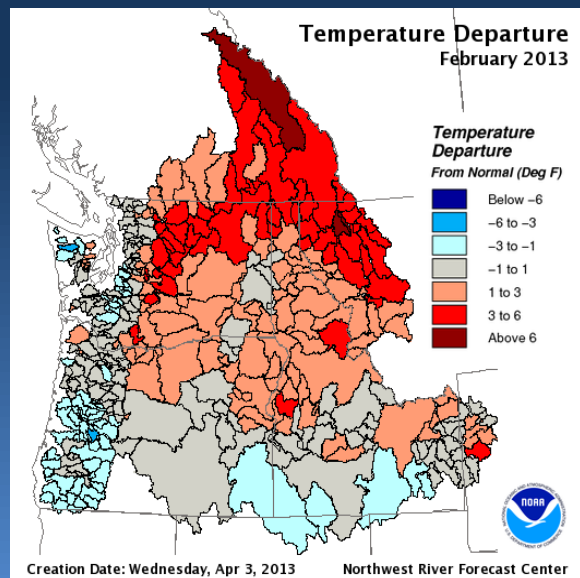
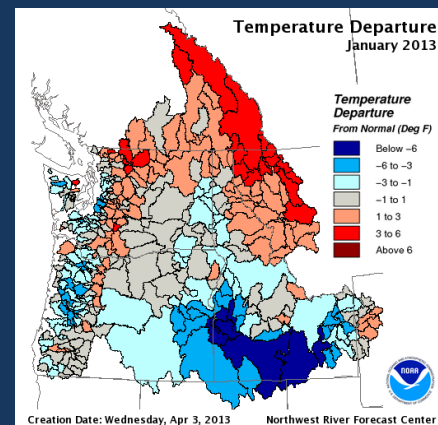
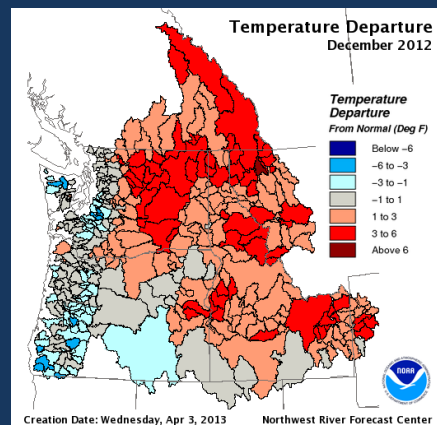
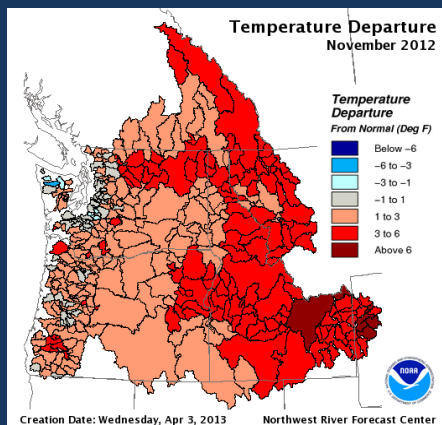
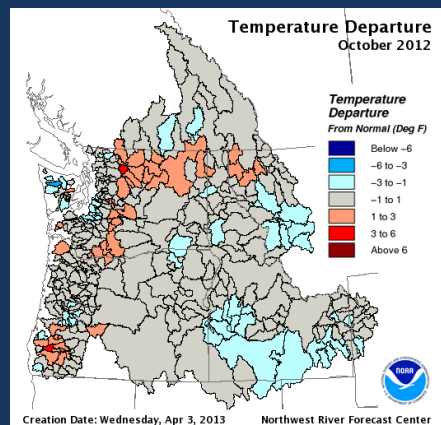


Observed Precipitation Water Year to Date (May 7th)

DIVISION NAME	OBS (in)	% Norm
Snake River abv Ice Harbor Dam	12.4	76
Columbia River abv Grand Coulee	25.0	96
Columbia River abv The Dalles	16.7	83



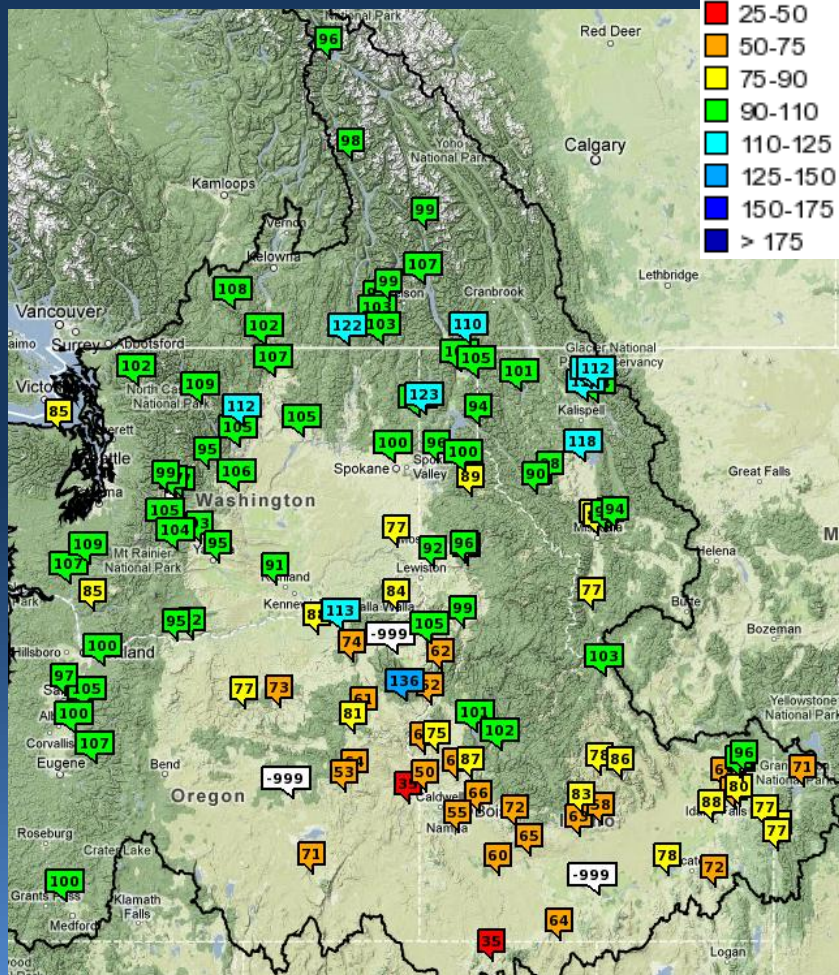
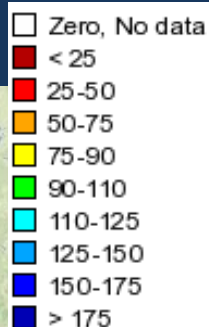
Temperature Departures





Current Adjusted Runoff Conditions

Seasonal Runoff, Oct 1st – May 7th



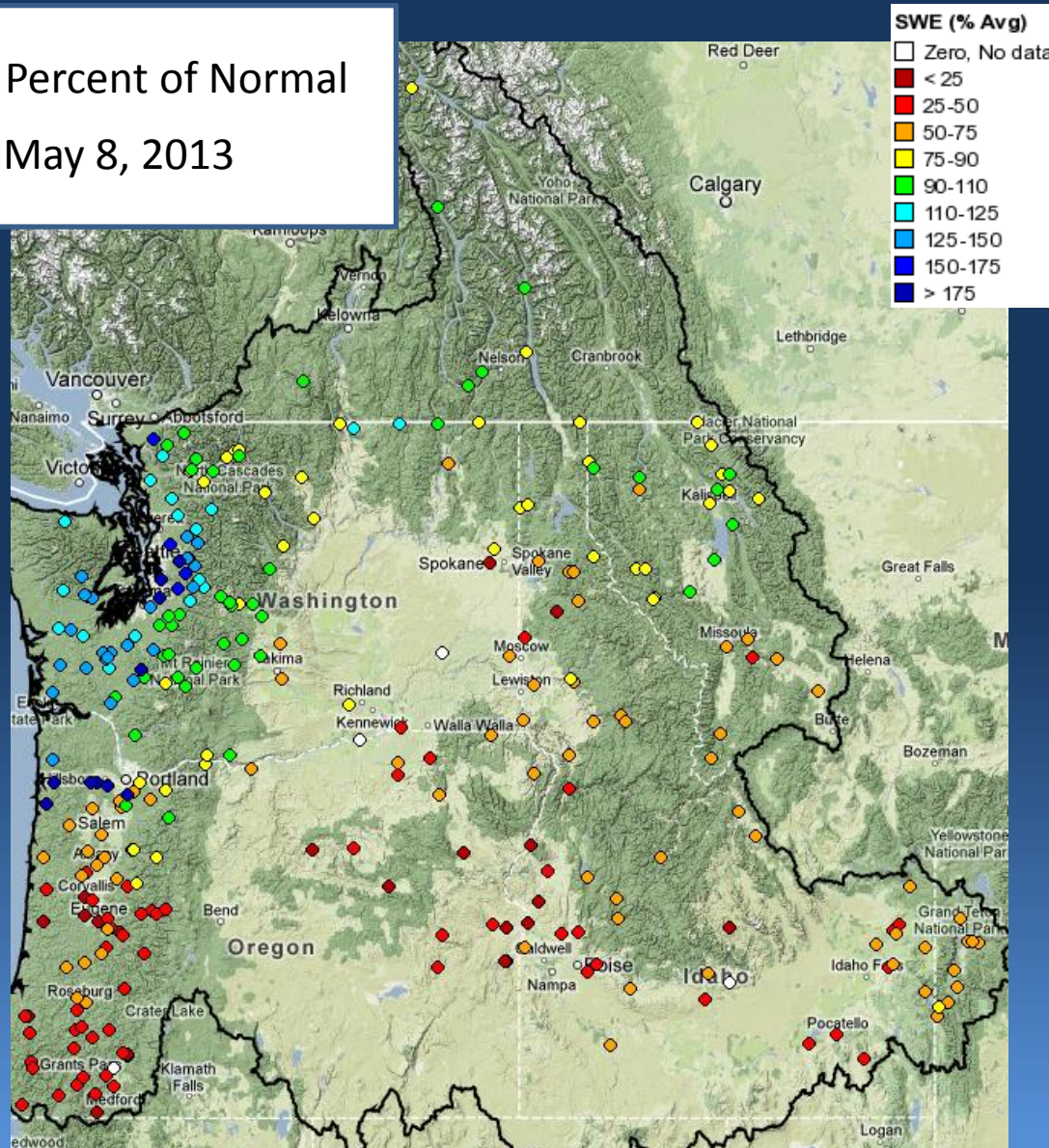
Percent of Normal

Oct-Dec Jan-Apr

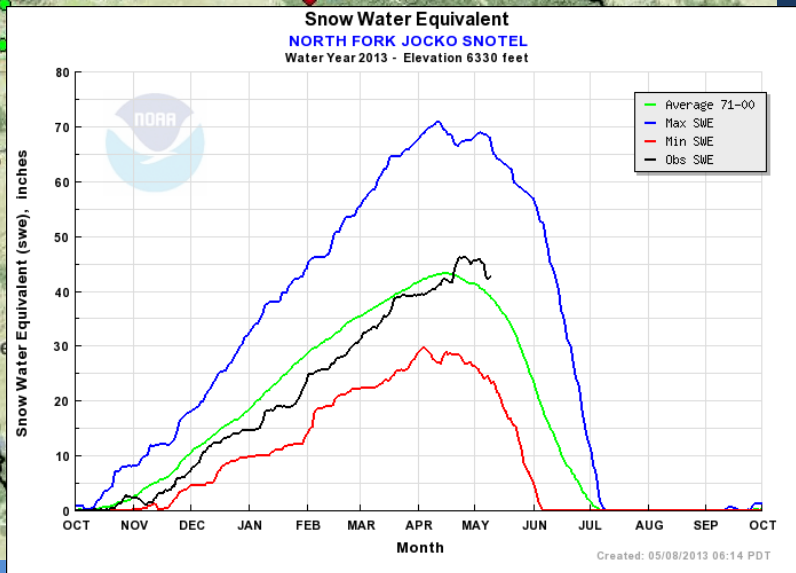
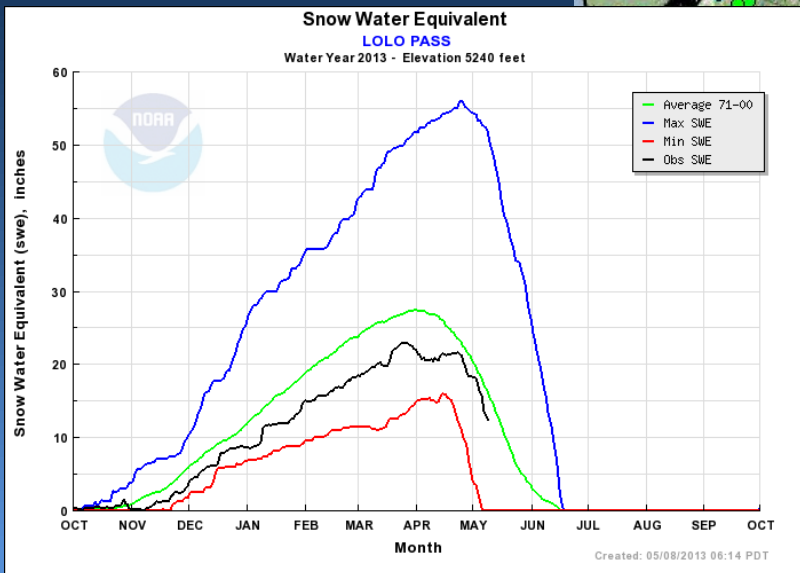
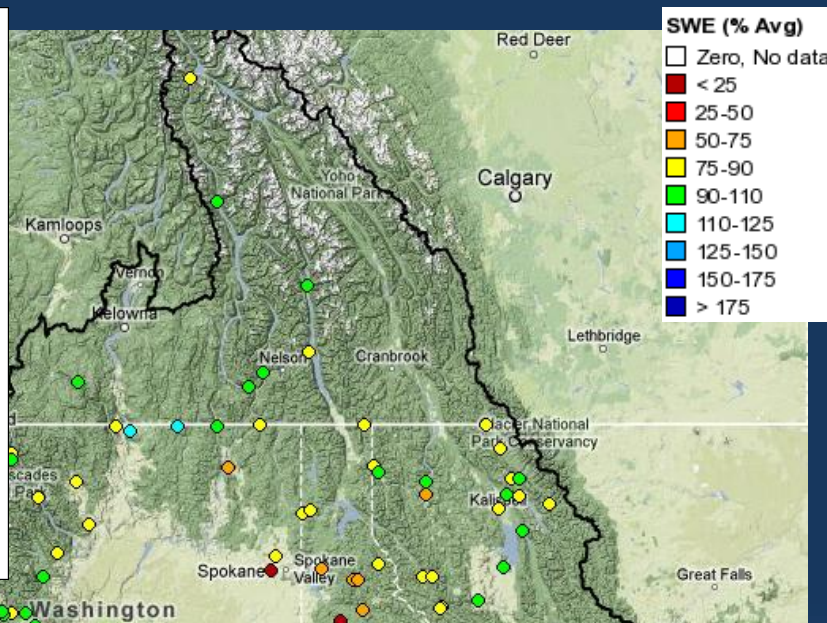
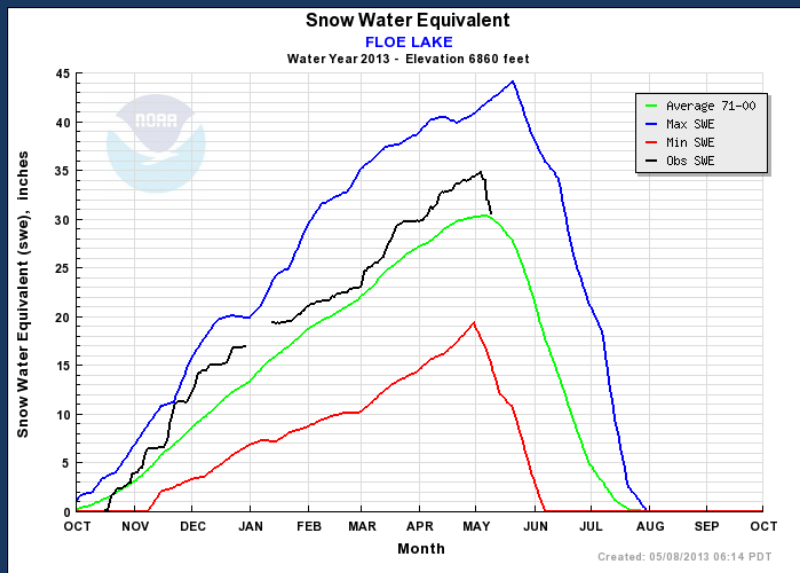
MICA	107	101
LIBBY	121	100
GRAND COULEE	131	102
DWORSHAK	141	84
LOWER GRANITE	104	70
THE DALLES	119	86

Current Snow Conditions (by Basin)

Percent of Normal
May 8, 2013

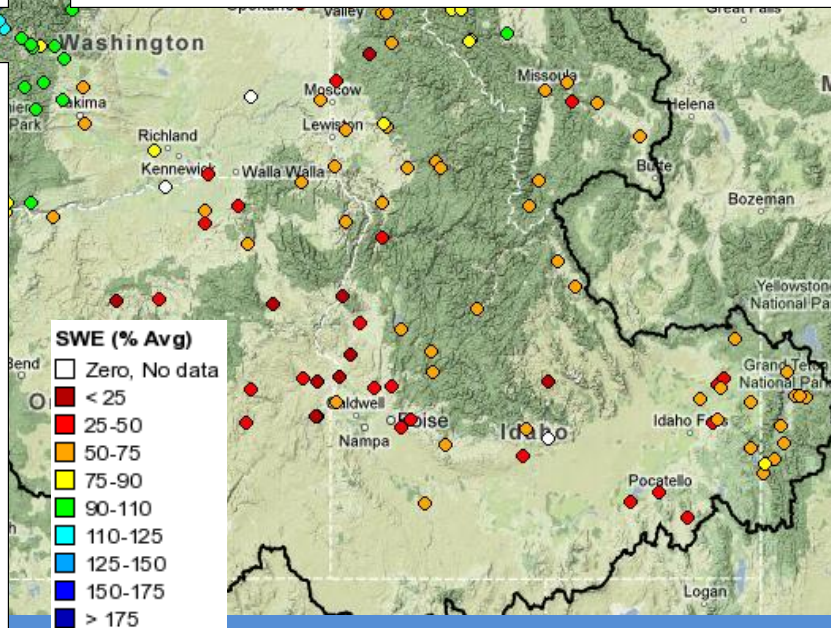
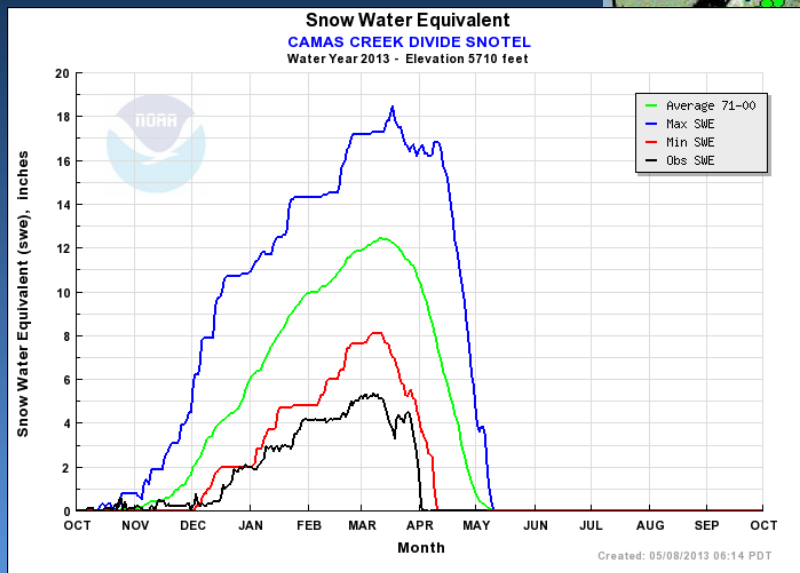
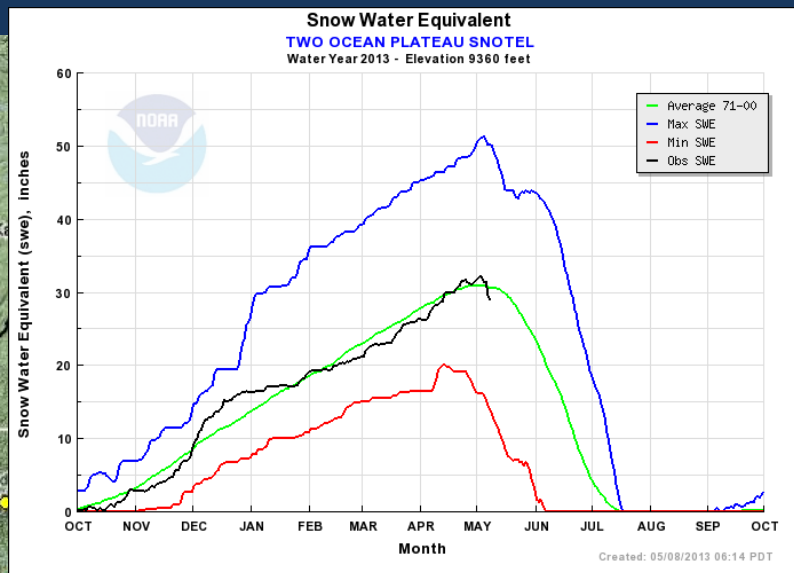
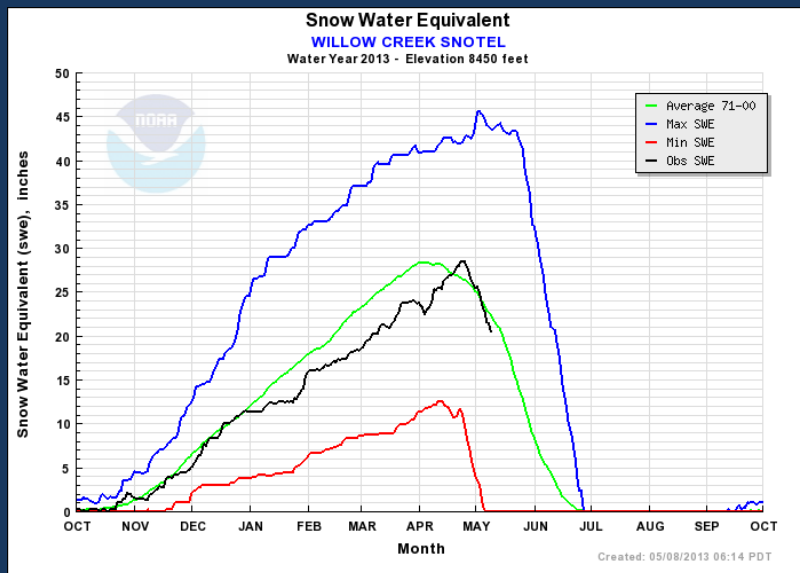


Upper Columbia Snow Conditions

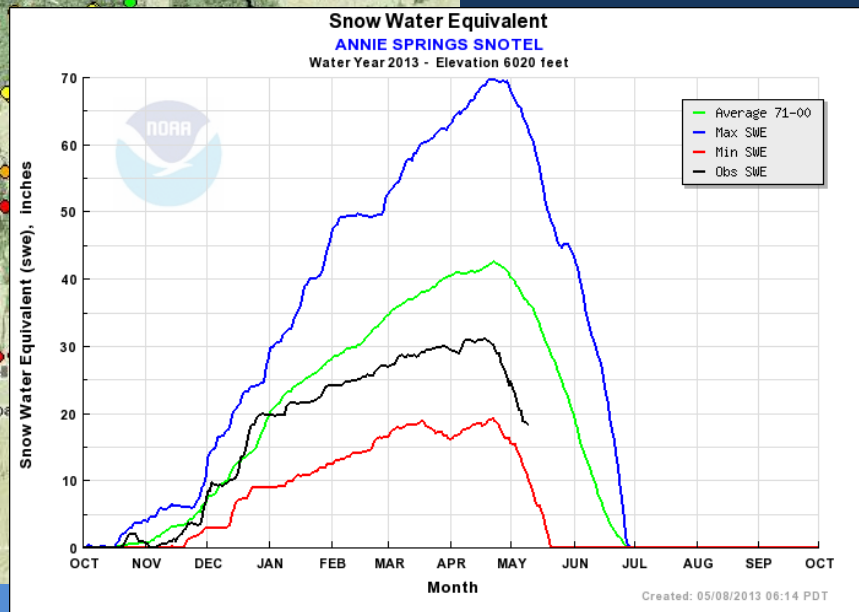
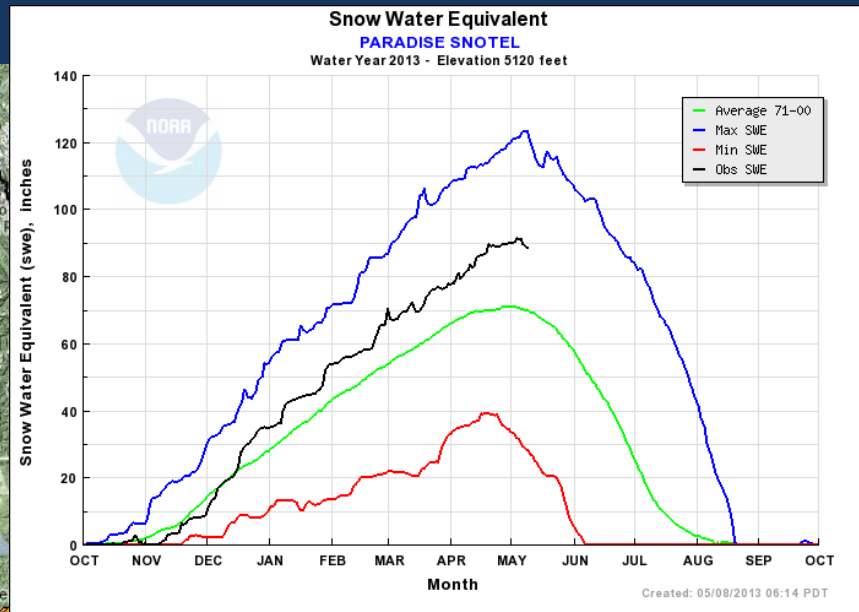
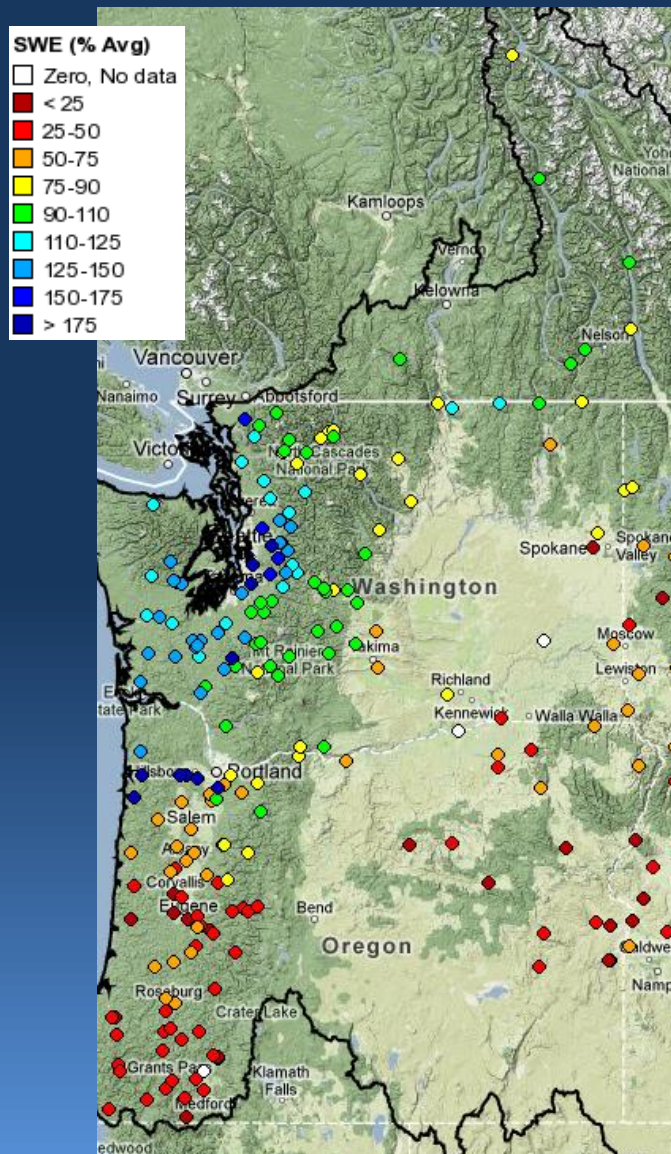




Snake River Snow Conditions



Lower Columbia Snow Conditions





Future Conditions



Climate Outlooks

10 Day Precipitation Forecast

Water Supply Forecasts

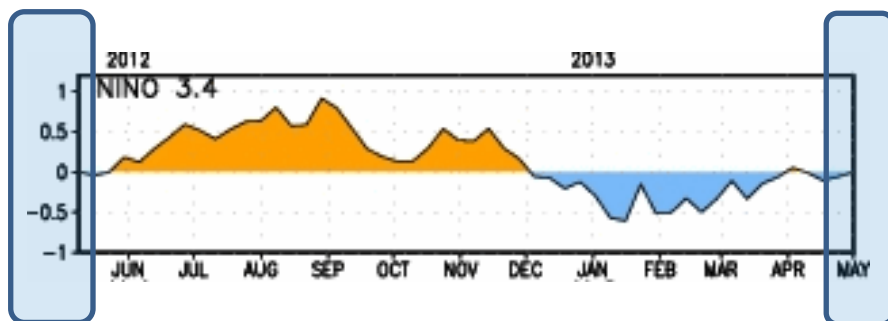
Enso: Observed and Forecast

SST Anomaly (Deg C)

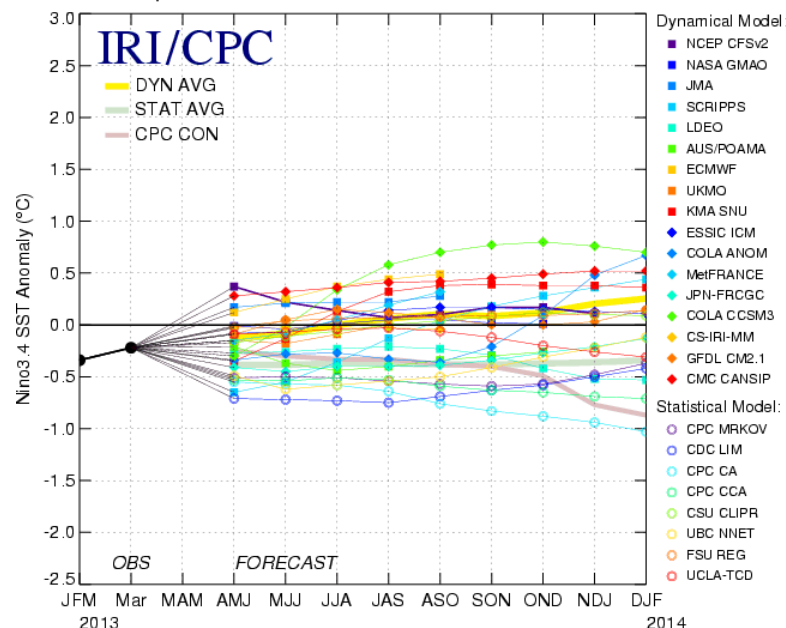
Latest observed: SST 3.4 ~ -0.0Deg C

Latest calculated ONI 3.4 = -0.4 Deg C

ONI = 3 month running mean of SST (Nov-Jan)



Mid-Apr 2013 Plume of Model ENSO Predictions



CPC Synopsis: ENSO-neutral conditions favored into fall 2013.

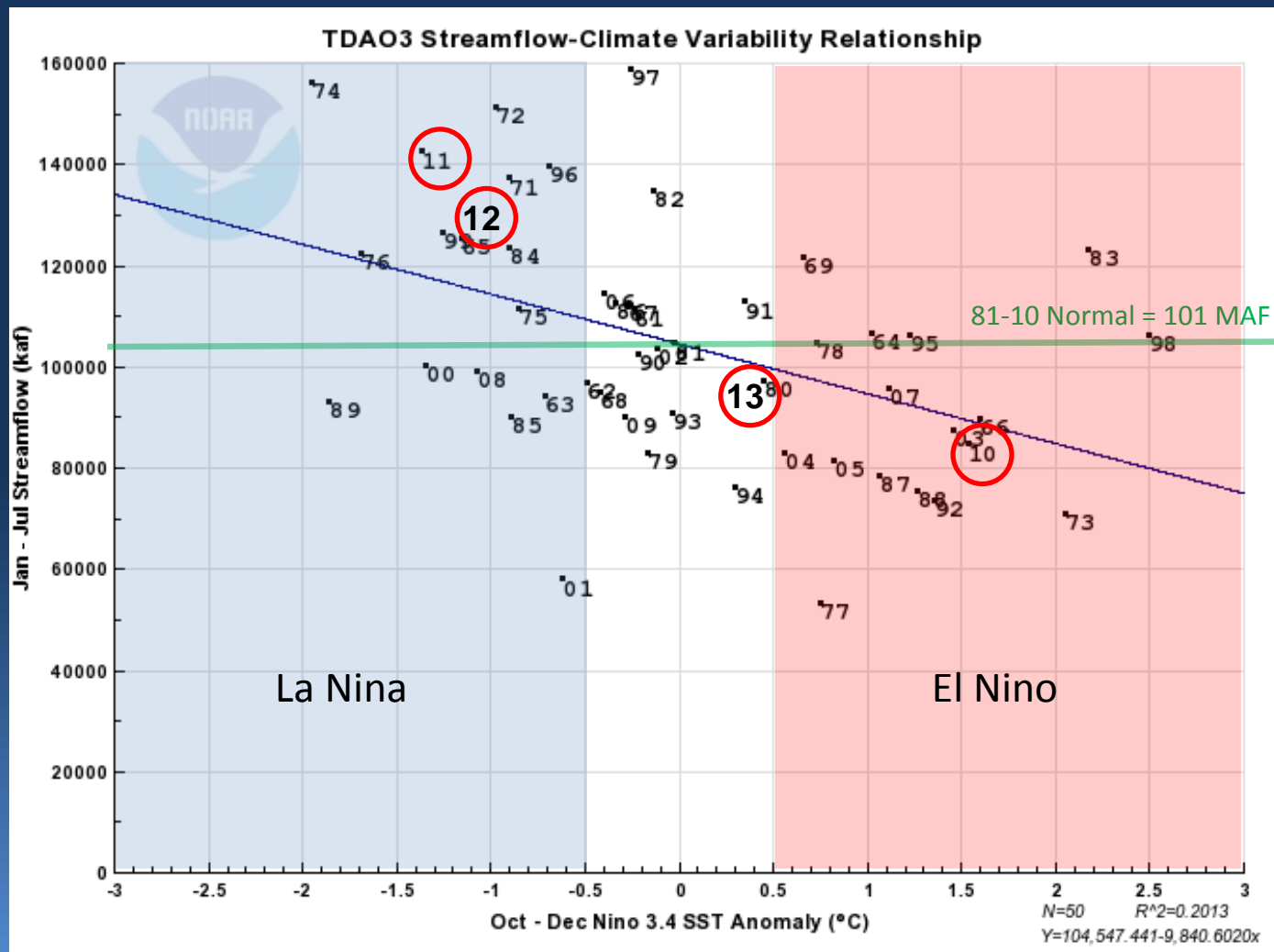
Source: Climate Prediction Center Weekly ENSO Update

http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/lanina/enso_evolution-status-fcsts-web.pdf



SST Anomaly vs Streamflow

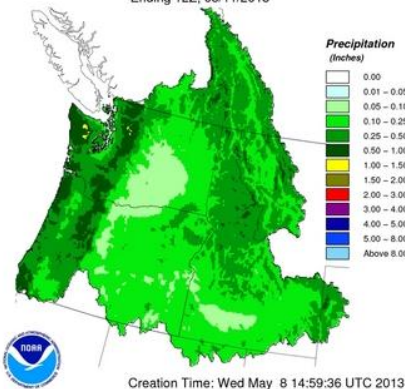
Columbia River near The Dalles



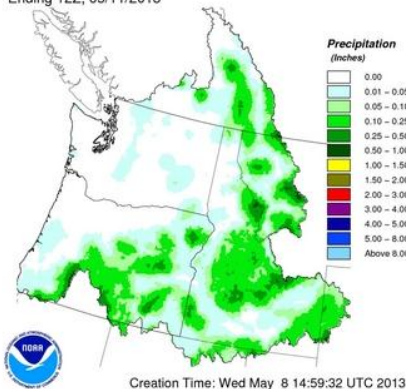
ESP 3 and 10 Day Precipitation Forecast

3 Day Forecast Precipitation: Volume Analysis

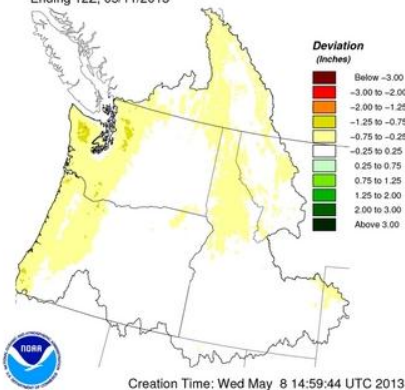
3 Day Precipitation Climatology
Ending 12Z, 05/11/2013



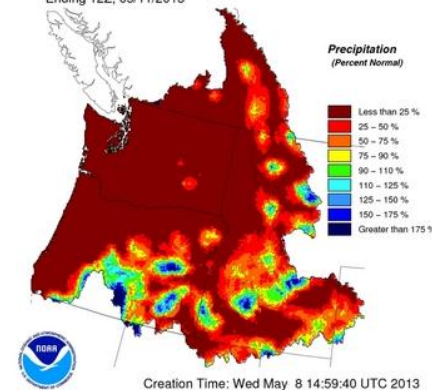
3 Day QPF
Ending 12Z, 05/11/2013



3 Day QPF (Deviation from Climatology)
Ending 12Z, 05/11/2013

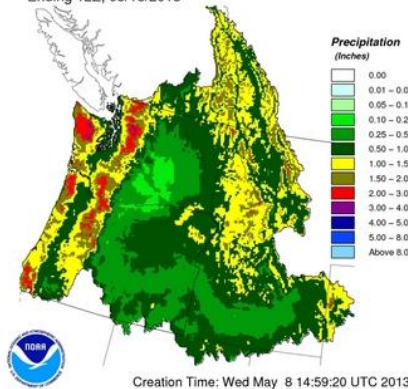


3 Day QPF (Percent of Climatology)
Ending 12Z, 05/11/2013

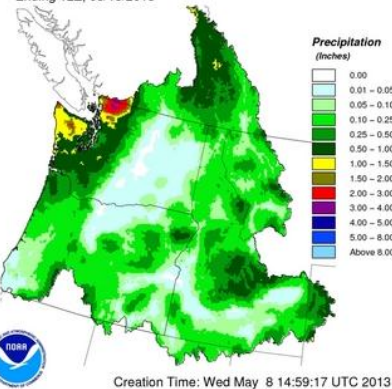


10 Day Forecast Precipitation: Volume Analysis

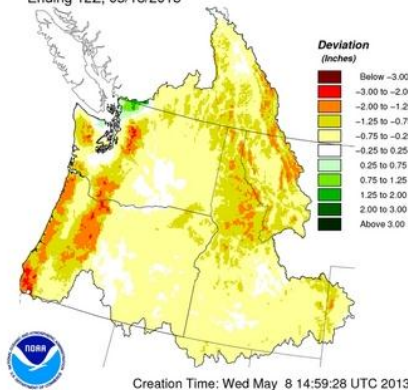
10 Day Precipitation Climatology
Ending 12Z, 05/18/2013



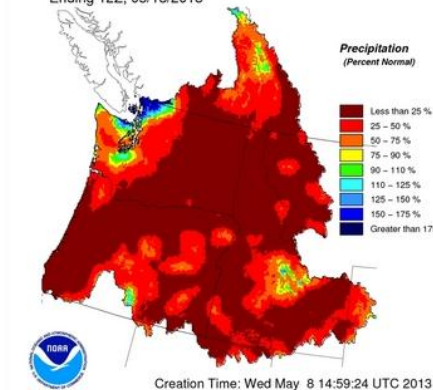
10 Day QPF
Ending 12Z, 05/18/2013



10 Day QPF (Deviation from Climatology)
Ending 12Z, 05/18/2013



10 Day QPF (Percent of Climatology)
Ending 12Z, 05/18/2013



Daily Updates Now Available:

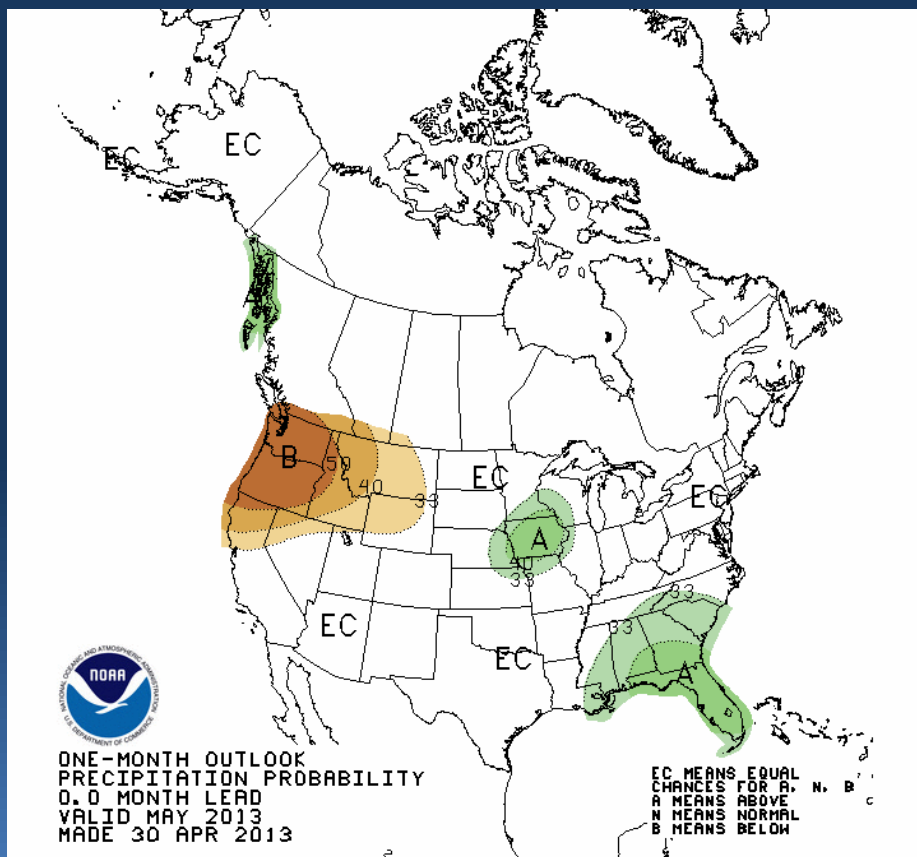
http://www.nwrfc.noaa.gov/water_supply/wy_summary/wy_summary.php



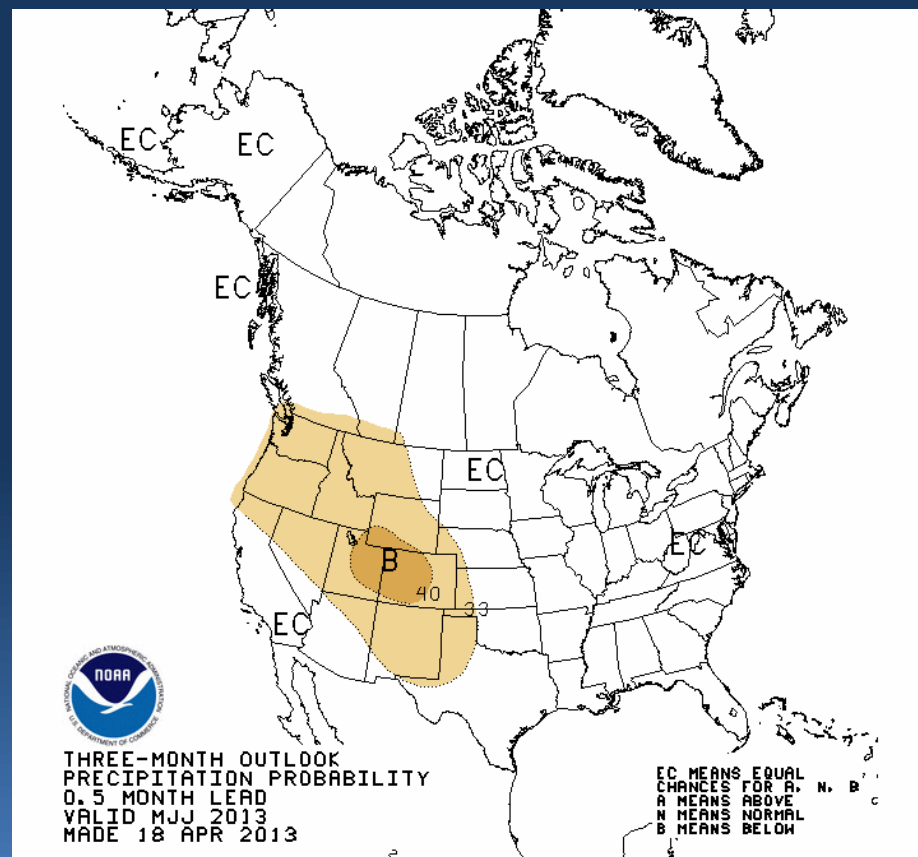
Climate Outlook: Precipitation



Current Month Outlook



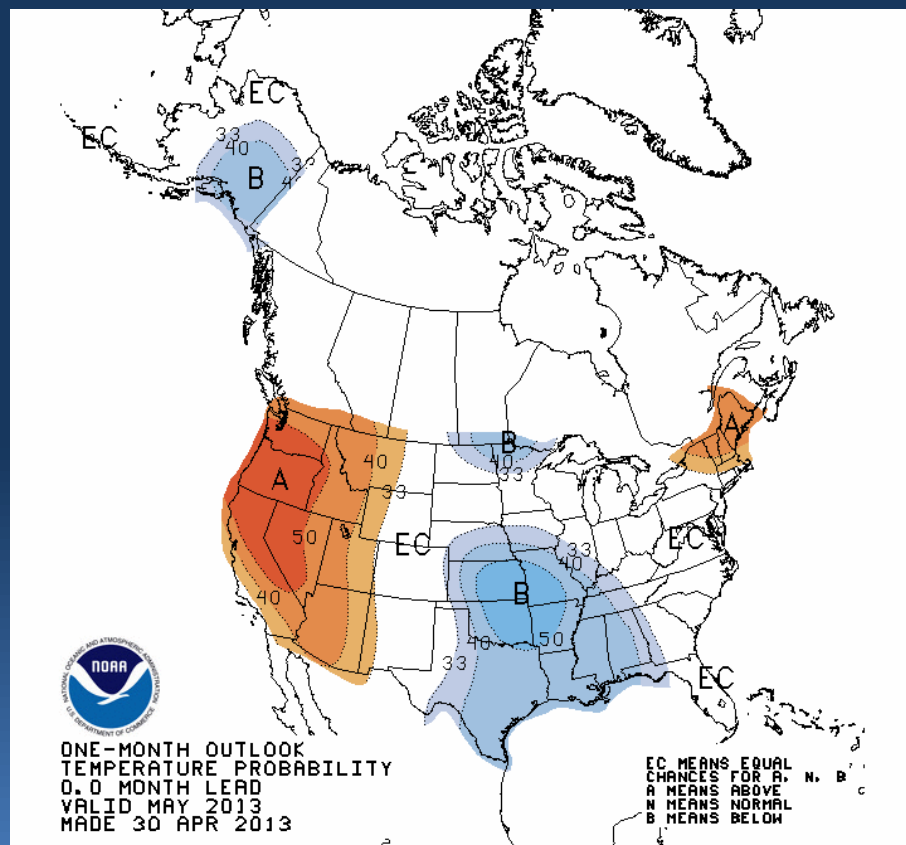
Three Month Outlook



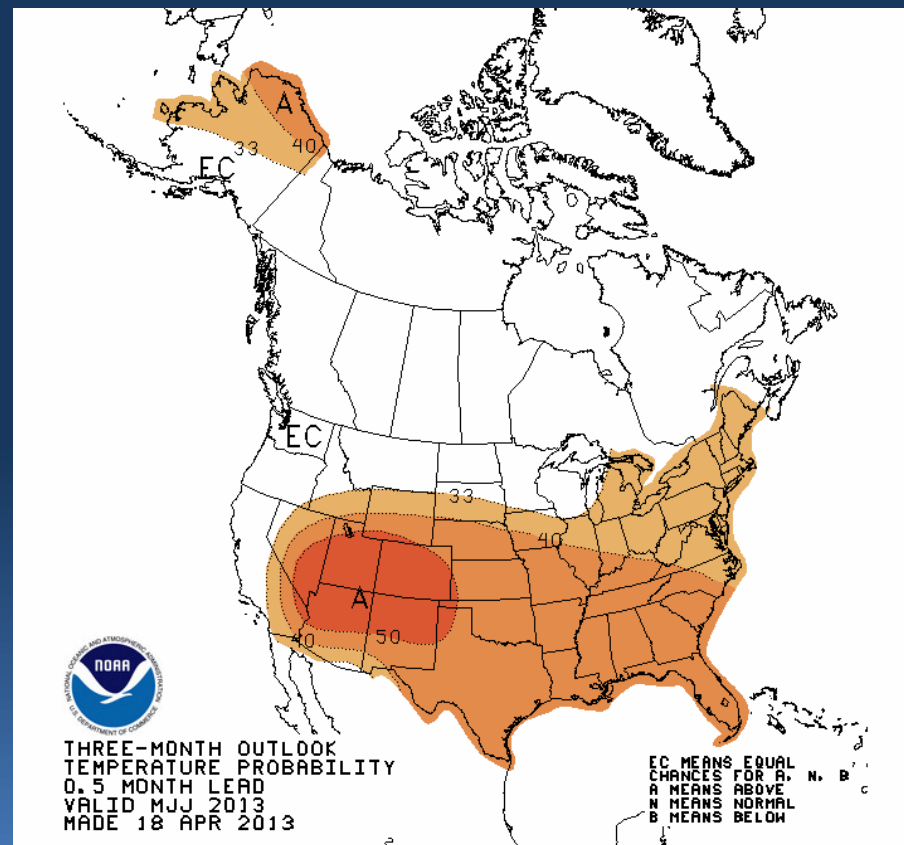


Climate Outlook: Temperature

Current Month Outlook



Three Month Outlook





Water Supply Forecasts



Issued
May 8, 2013

Water Supply Forecast (% Avg)

□ No Average, No data

■ < 25

■ 25-50

■ 50-75

■ 75-90

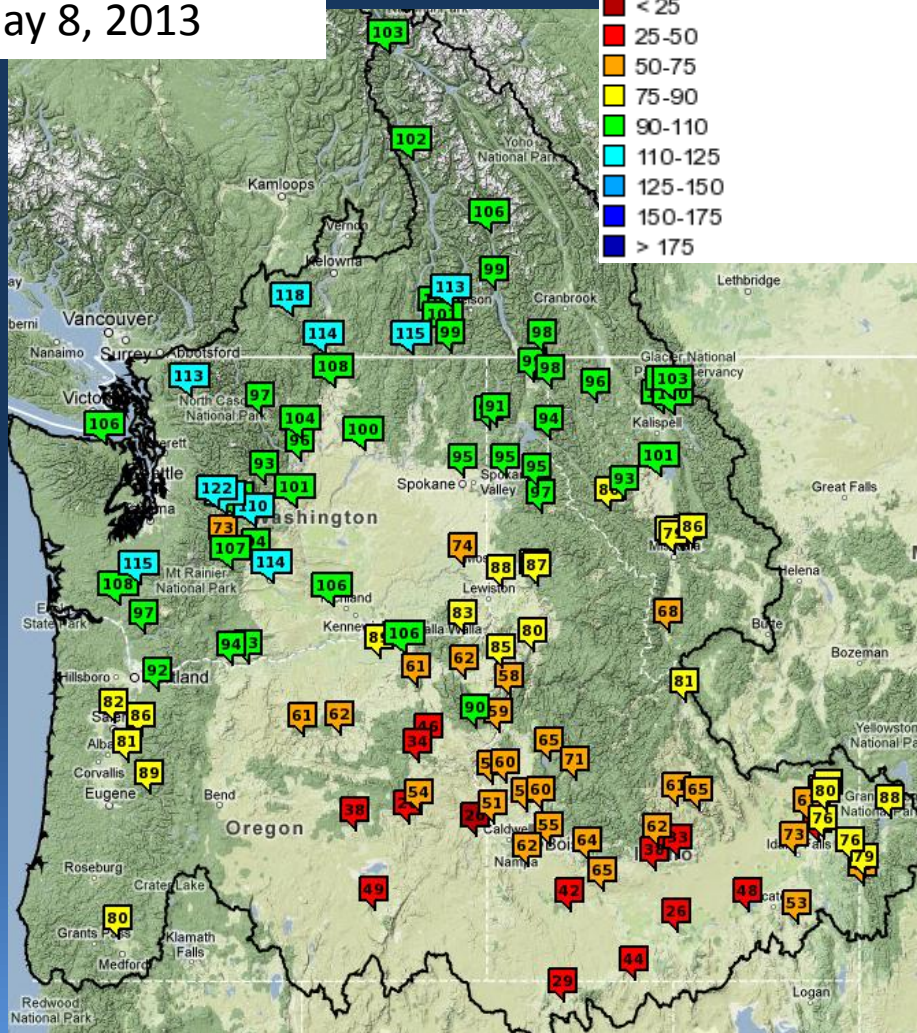
■ 90-110

■ 110-125

■ 125-150

■ 150-175

■ > 175



Ensemble Streamflow Procedure

May 8 Issuance Date

May 7 Ensemble Date

Official Forecasts include 10 days
of forecast precipitation

NWRFC 3 and 0 day QPF available

Forecasts updated weekly/**daily**

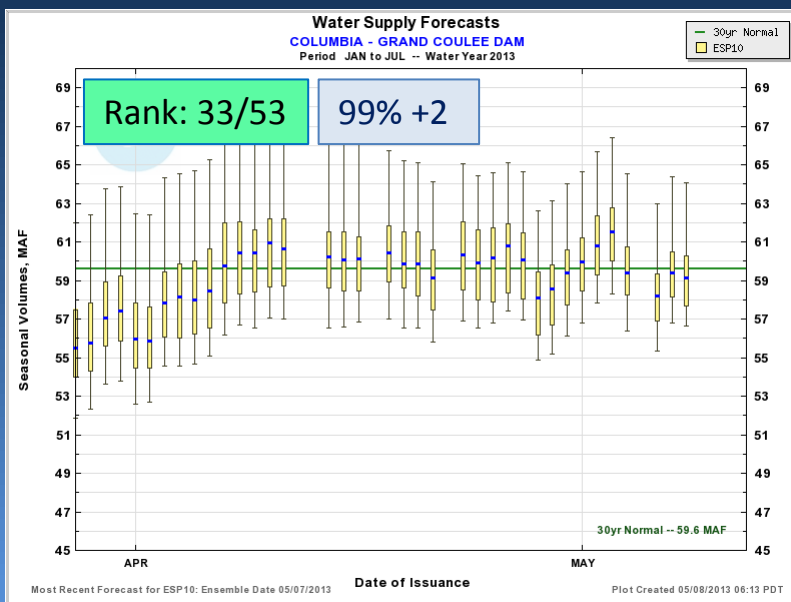
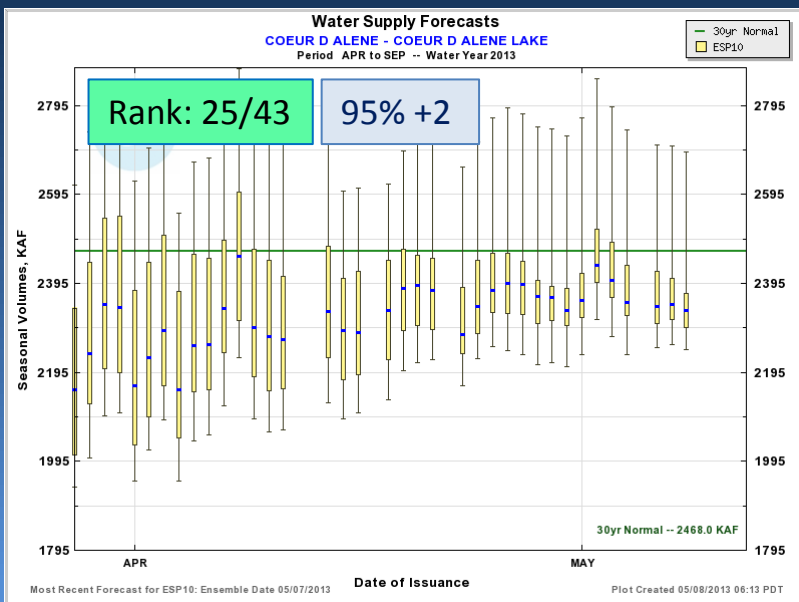
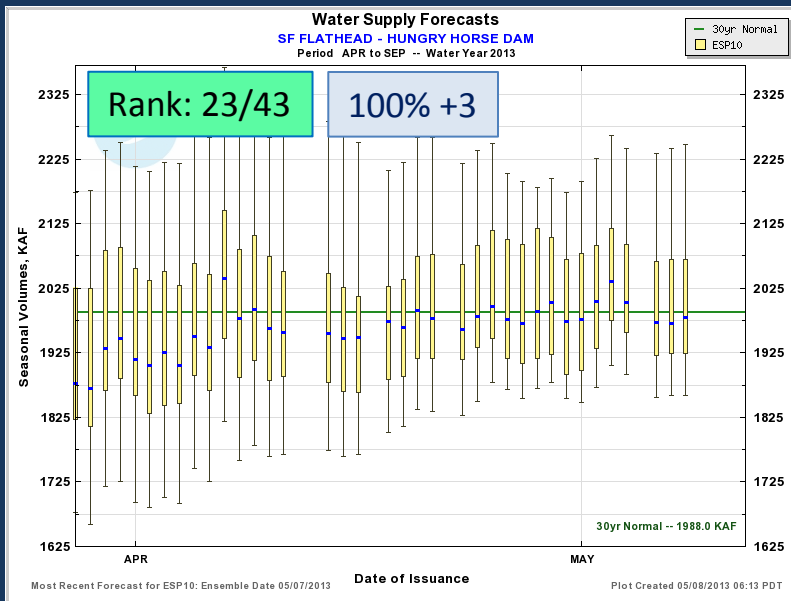
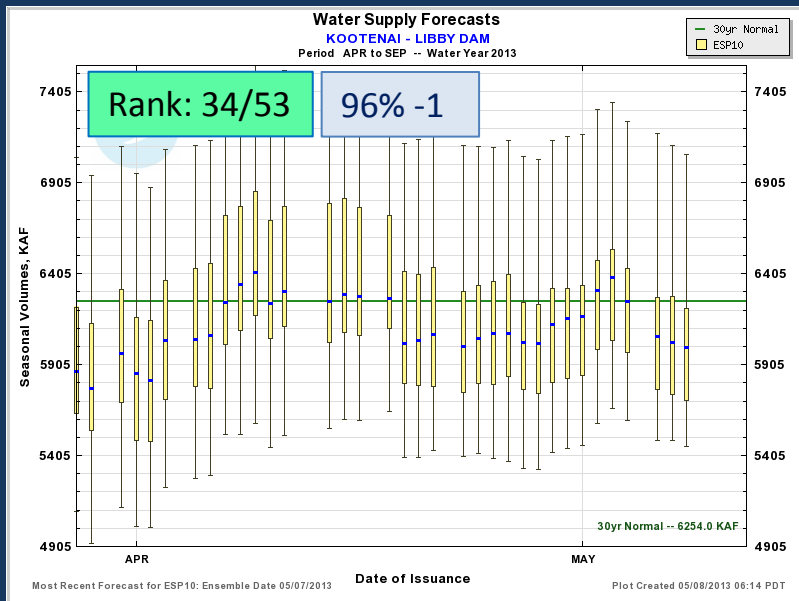
Agency Collaborated

Model States/Snow/Runoff updated
continuously through month

Compared to 30 yr Runoff Normal
(1981-2010)

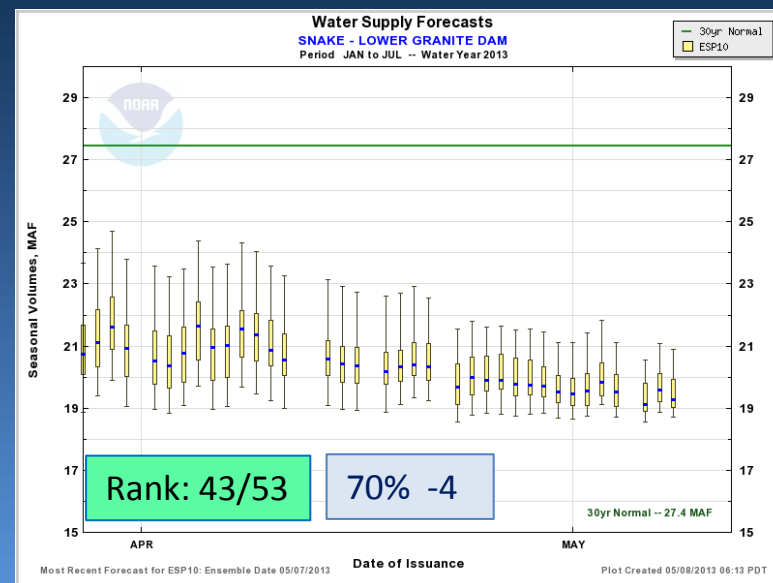
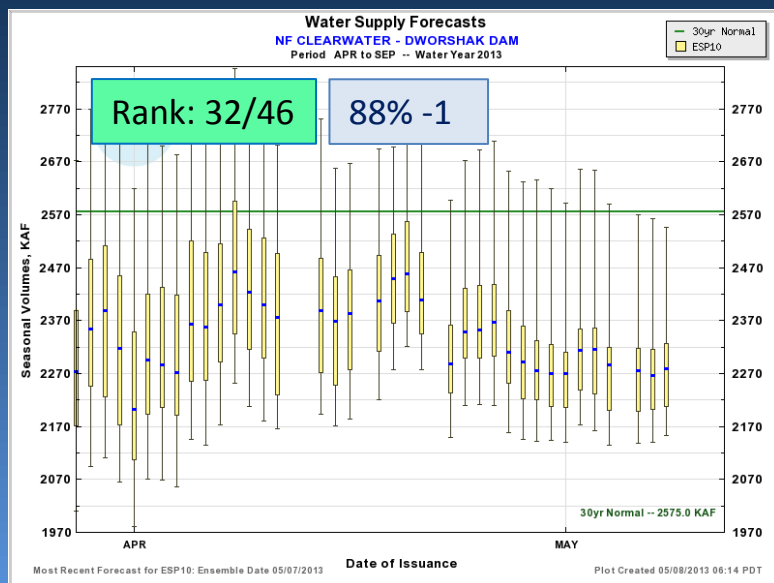
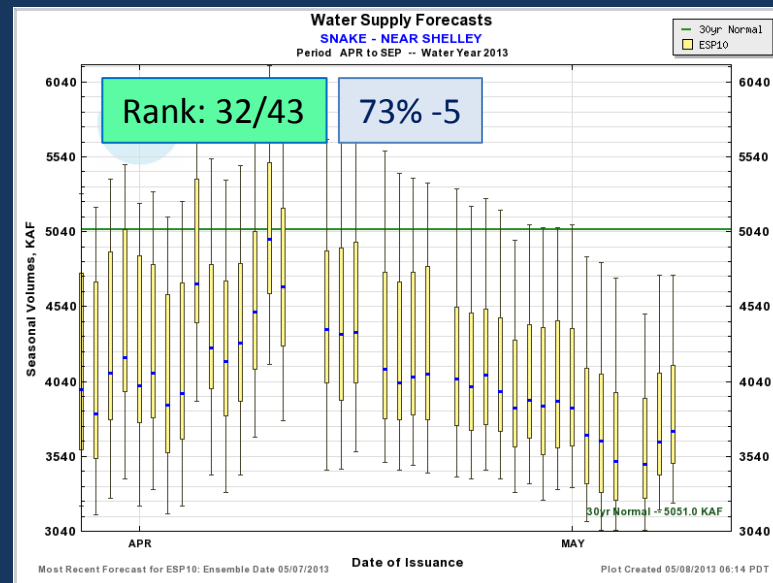
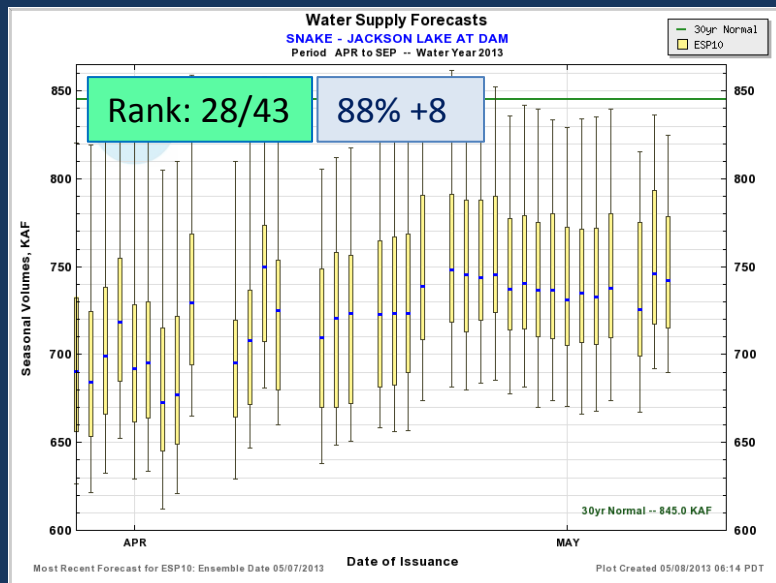


Water Supply Forecast: Upper Columbia



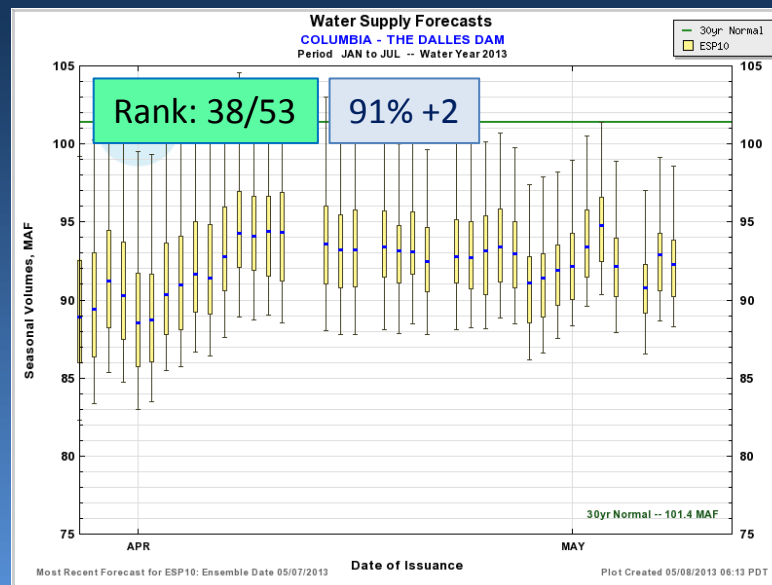
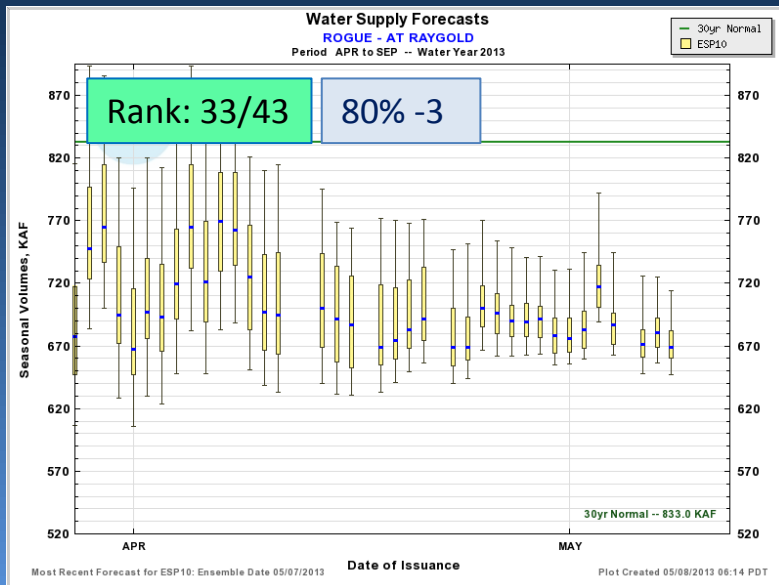
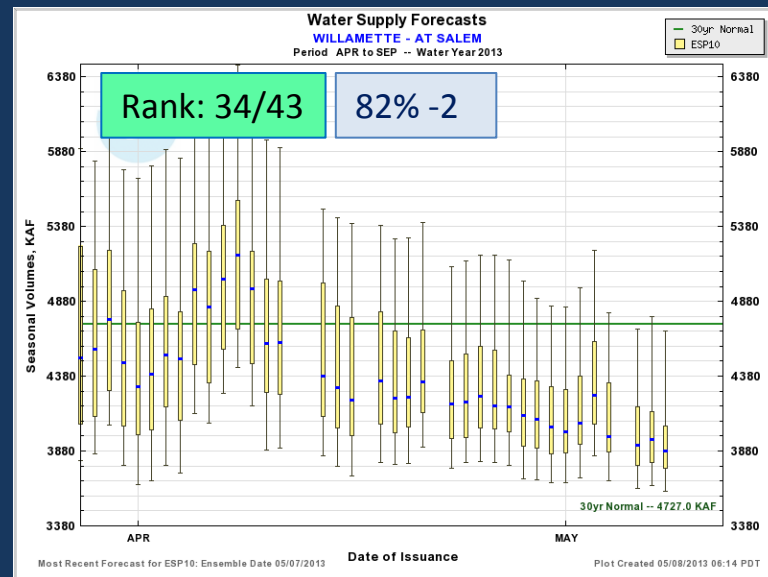
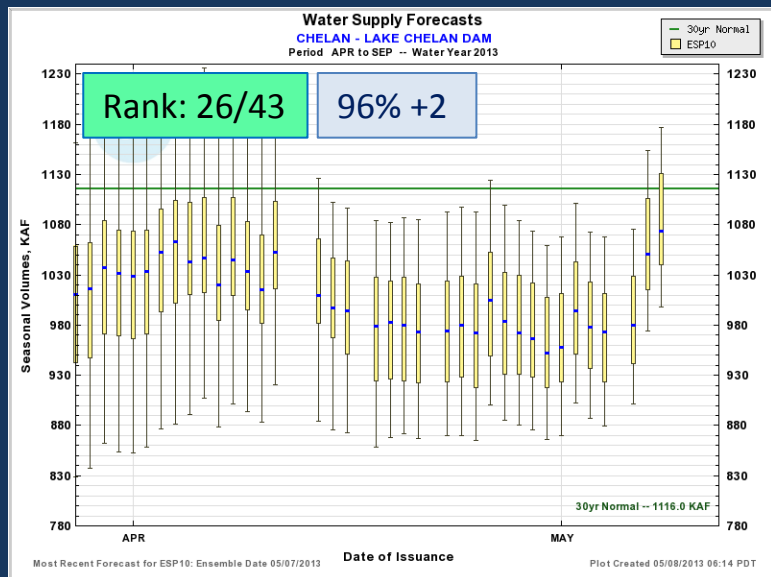


Water Supply Forecast: Snake





Water Supply Forecast: Lower Columbia





NWRFC Water Supply Webpage

http://www.nwrfc.noaa.gov/water_supply/ws_schd.cgi



2013 Schedule for Live Water Supply Briefings

Jan	Feb	Mar	Apr	May	Jun
10th	7th	7th	4th	9th	TBD

All presentations held at 10am PDT/PST, unless noted otherwise

[Click here for Registration Information](#)

[Archive of Previous Briefings](#)

<http://www.nwrfc.noaa.gov/presentations/presentations.cgi>

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